

The Hawaii and California-based Pelagic Longline Vessels Annual Report for 1 January–31 December 2019¹

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This annual report for the period 1 January–31 December 2019, contains summary data of fishing effort and catch statistics as reported on longline log sheets for Hawaii- and California-based pelagic longline vessels. Data in this report originate from the PIFSC Information Management System (Oracle) table LLDS_RPT_STATS_HC20200315_RFMO, representing preliminary data received as of 15 March 2020. Catch and effort statistics are based on date of longline haul. When a statistic (number of vessels, trips) involves dates of haul in two summary periods (i.e., years, semi-annual, quarters), the item is counted in both summary periods. Thus, a trip total is for “partial and completed” trips. As such, these statistics are not additive (i.e., sum of four quarters is not the total for the year).

The following tables show fishery statistics for the stated time period, area, and set type, and include effort (number of vessels, trips, sets, and hooks set). For each listed species, organized by pelagic management unit species (PMUS), the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE), measured as the number of fish caught per 1,000 hooks.

Additional figures show catch numbers, effort, and spatial distributions for important species for the stated time period, area, and set type, for years 2000–2019.

References:

Pacific Islands Fisheries Science Center, 2020: Hawaii Longline Logbook,
<https://www.fisheries.noaa.gov/inport/item/2721>

Southwest Fisheries Science Center, 2020: California Pelagic Longline Fishery,
<https://www.fisheries.noaa.gov/inport/item/12906>

¹PIFSC Data Report DR-20-011. Issued 04 September 2020
<https://doi.org/10.25923/sxxz-z763>

Table 1. For the period 1 January - 31 December, 2019, Hawaii and California-based pelagic longline vessels annual statistics for all fishing areas and all fishing categories (set types), including effort (number of vessels, trips, sets, and hooks set), and for each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, along with the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1,000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage

Time Period 1 January - 31 December, 2019
 Set Types All sets
 Fishing Area All Areas

Number of vessels active	150
Number of trips (partial or completed)	1,749
Number of sets	22,797
Number of hooks set	63,526,030

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
PMUS				
Billfish PMUS				
Blue marlin	12,926	12,773	153	0.20
Striped marlin	20,552	19,921	631	0.32
Shortbill spearfish	16,314	15,899	415	0.26
Swordfish	8,328	8,055	273	0.13
Other billfishes	1,426	1,400	26	0.02
Total	59,546	58,048	1,498	0.94
Shark PMUS				
Blue shark	114,317	2	114,315	1.80
Mako sharks	5,082	560	4,522	0.08
Thresher sharks	8,748	53	8,695	0.14
Oceanic whitetip shark	493	0	493	0.01
Silky shark	363	0	363	0.01
Total	129,003	615	128,388	2.03
Tuna PMUS				
Albacore	4,425	4,334	91	0.07
Bigeye tuna	224,034	218,049	5,985	3.53
Yellowfin tuna	62,337	60,483	1,854	0.98
Bluefin tuna	14	14	0	0.00
Skipjack tuna	33,072	32,694	378	0.52
Other tunas	0	0	0	0.00
Total	323,882	315,574	8,308	5.10
Other PMUS				
Mahimahi	37,752	37,326	426	0.59
Moonfish	24,631	24,394	237	0.39
Wahoo	44,334	44,112	222	0.70
Oilfish	16,587	13,972	2,615	0.26
Pomfret	53,005	52,566	439	0.83
Total	176,309	172,370	3,939	2.78
Total PMUS	688,740	546,607	142,133	10.84
Non-PMUS Sharks	272	0	272	0.00
Total Non-PMUS	6,015	185	5,830	0.09
Total All Species	694,755	546,792	147,963	10.94

Table 2. For the period 1 January - 31 December, 2019, Hawaii and California-based pelagic longline vessels annual statistics for fishing within the U.S. EEZ (Main Hawaiian Islands, Northwest Hawaiian Islands, or the Pacific Remote Islands, and with all fishing categories (set types), including effort (number of vessels, trips, sets, and hooks set), and for each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, along with the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1,000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage

Time Period 1 January - 31 December, 2019
 Set Types All sets
 Fishing Area Inside U.S. EEZ

Number of vessels active	136
Number of trips (partial or completed)	802
Number of sets	5,204
Number of hooks set	14,315,121

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
PMUS				
Billfish PMUS				
Blue marlin	3,851	3,796	55	0.27
Striped marlin	5,758	5,712	46	0.40
Shortbill spearfish	3,738	3,692	46	0.26
Swordfish	1,125	1,093	32	0.08
Other billfishes	286	283	3	0.02
Total	14,758	14,576	182	1.03
Shark PMUS				
Blue shark	27,724	0	27,724	1.94
Mako sharks	985	125	860	0.07
Thresher sharks	1,224	3	1,221	0.09
Oceanic whitetip shark	169	0	169	0.01
Silky shark	128	0	128	0.01
Total	30,230	128	30,102	2.11
Tuna PMUS				
Albacore	167	167	0	0.01
Bigeye tuna	40,027	39,251	776	2.80
Yellowfin tuna	12,159	11,935	224	0.85
Bluefin tuna	0	0	0	0.00
Skipjack tuna	7,741	7,655	86	0.54
Other tunas	0	0	0	0.00
Total	60,094	59,008	1,086	4.20
Other PMUS				
Mahimahi	6,060	6,011	49	0.42
Moonfish	2,140	2,137	3	0.15
Wahoo	8,229	8,208	21	0.57
Oilfish	3,248	2,747	501	0.23
Pomfret	13,195	13,083	112	0.92
Total	32,872	32,186	686	2.30
Total PMUS	137,954	105,898	32,056	9.64
Non-PMUS Sharks	67	0	67	0.00
Total Non-PMUS	475	31	444	0.03
Total All Species	138,429	105,929	32,500	9.67

Table 3. For the period 1 January - 31 December, 2019, Hawaii and California-based pelagic longline vessels annual statistics for fishing outside the U.S. EEZ and with all fishing categories (set types), including effort (number of vessels, trips, sets, and hooks set), and for each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, along with the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1,000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage		Number of vessels active		
Time Period	1 January - 31 December, 2019	Number of vessels active	149	
Set Types	All sets	Number of trips (partial or completed)	1,560	
Fishing Area	Outside U.S. EEZ	Number of sets	17,593	
		Number of hooks set	49,210,909	

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
PMUS				
Billfish PMUS				
Blue marlin	9,075	8,977	98	0.18
Striped marlin	14,794	14,209	585	0.30
Shortbill spearfish	12,576	12,207	369	0.26
Swordfish	7,203	6,962	241	0.15
Other billfishes	1,140	1,117	23	0.02
Total	44,788	43,472	1,316	0.91
Shark PMUS				
Blue shark	86,593	2	86,591	1.76
Mako sharks	4,097	435	3,662	0.08
Thresher sharks	7,524	50	7,474	0.15
Oceanic whitetip shark	324	0	324	0.01
Silky shark	235	0	235	0.00
Total	98,773	487	98,286	2.01
Tuna PMUS				
Albacore	4,258	4,167	91	0.09
Bigeye tuna	184,007	178,798	5,209	3.74
Yellowfin tuna	50,178	48,548	1,630	1.02
Bluefin tuna	14	14	0	0.00
Skipjack tuna	25,331	25,039	292	0.51
Other tunas	0	0	0	0.00
Total	263,788	256,566	7,222	5.36
Other PMUS				
Mahimahi	31,692	31,315	377	0.64
Moonfish	22,491	22,257	234	0.46
Wahoo	36,105	35,904	201	0.73
Oilfish	13,339	11,225	2,114	0.27
Pomfret	39,810	39,483	327	0.81
Total	143,437	140,184	3,253	2.91
Total PMUS	550,786	440,709	110,077	11.19
Non-PMUS Sharks	205	0	205	0.00
Total Non-PMUS	5,540	154	5,386	0.11
Total All Species	556,326	440,863	115,463	11.30

Table 4. For the period 1 January - 31 December, 2019, Hawaii and California-based pelagic longline vessels annual statistics for all fishing areas and with shallow set type, including effort (number of vessels, trips, sets, and hooks set), and for each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, along with the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1,000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage

Time Period 1 January - 31 December, 2019
 Set Types Shallow sets
 Fishing Area All Areas

Number of vessels active	14
Number of trips (partial or completed)	25
Number of sets	284
Number of hooks set	351,059

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
PMUS				
Billfish PMUS				
Blue marlin	0	0	0	0.00
Striped marlin	12	9	3	0.03
Shortbill spearfish	18	13	5	0.05
Swordfish	3,435	3,317	118	9.78
Other billfishes	3	3	0	0.01
Total	3,468	3,342	126	9.88
Shark PMUS				
Blue shark	2,993	0	2,993	8.53
Mako sharks	197	98	99	0.56
Thresher sharks	5	0	5	0.01
Oceanic whitetip shark	0	0	0	0.00
Silky shark	0	0	0	0.00
Total	3,195	98	3,097	9.10
Tuna PMUS				
Albacore	81	81	0	0.23
Bigeye tuna	874	838	36	2.49
Yellowfin tuna	331	327	4	0.94
Bluefin tuna	0	0	0	0.00
Skipjack tuna	20	16	4	0.06
Other tunas	0	0	0	0.00
Total	1,306	1,262	44	3.72
Other PMUS				
Mahimahi	247	246	1	0.70
Moonfish	31	31	0	0.09
Wahoo	3	3	0	0.01
Oilfish	56	38	18	0.16
Pomfret	5	5	0	0.01
Total	342	323	19	0.97
Total PMUS	8,311	5,025	3,286	23.67
Non-PMUS Sharks	0	0	0	0.00
Total Non-PMUS	0	0	0	0.00
Total All Species	8,311	5,025	3,286	23.67

Table 5. For the period 1 January - 31 December, 2019, Hawaii and California-based pelagic longline vessels annual statistics for all fishing areas and with deep set type, including effort (number of vessels, trips, sets, and hooks set), and for each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, along with the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1,000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage

Time Period	1 January - 31 December, 2019
Set Types	Deep sets
Fishing Area	All Areas

Number of vessels active	150
Number of trips (partial or completed)	1,724
Number of sets	22,513
Number of hooks set	63,174,971

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
PMUS				
Billfish PMUS				
Blue marlin	12,926	12,773	153	0.20
Striped marlin	20,540	19,912	628	0.33
Shortbill spearfish	16,296	15,886	410	0.26
Swordfish	4,893	4,738	155	0.08
Other billfishes	1,423	1,397	26	0.02
Total	56,078	54,706	1,372	0.89
Shark PMUS				
Blue shark	111,324	2	111,322	1.76
Mako sharks	4,885	462	4,423	0.08
Thresher sharks	8,743	53	8,690	0.14
Oceanic whitetip shark	493	0	493	0.01
Silky shark	363	0	363	0.01
Total	125,808	517	125,291	1.99
Tuna PMUS				
Albacore	4,344	4,253	91	0.07
Bigeye tuna	223,160	217,211	5,949	3.53
Yellowfin tuna	62,006	60,156	1,850	0.98
Bluefin tuna	14	14	0	0.00
Skipjack tuna	33,052	32,678	374	0.52
Other tunas	0	0	0	0.00
Total	322,576	314,312	8,264	5.11
Other PMUS				
Mahimahi	37,505	37,080	425	0.59
Moonfish	24,600	24,363	237	0.39
Wahoo	44,331	44,109	222	0.70
Oilfish	16,531	13,934	2,597	0.26
Pomfret	53,000	52,561	439	0.84
Total	175,967	172,047	3,920	2.79
Total PMUS	680,429	541,582	138,847	10.77
Non-PMUS Sharks	272	0	272	0.00
Total Non-PMUS	6,015	185	5,830	0.10
Total All Species	686,444	541,767	144,677	10.87

Table 7. For the period 1 January - 31 December, 2019, Hawaii and California-based pelagic longline vessels annual statistics for fishing within the U.S. EEZ (Main Hawaiian Islands, Northwest Hawaiian Islands, or the Pacific Remote Islands, and with deep sets, including effort (number of vessels, trips, sets, and hooks set), and for each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, along with the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1,000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage

Time Period 1 January - 31 December, 2019
 Set Types Deep sets
 Fishing Area Inside U.S. EEZ

Number of vessels active	136
Number of trips (partial or completed)	802
Number of sets	5,204
Number of hooks set	14,315,121

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
PMUS				
Billfish PMUS				
Blue marlin	3,851	3,796	55	0.27
Striped marlin	5,758	5,712	46	0.40
Shortbill spearfish	3,738	3,692	46	0.26
Swordfish	1,125	1,093	32	0.08
Other billfishes	286	283	3	0.02
Total	14,758	14,576	182	1.03
Shark PMUS				
Blue shark	27,724	0	27,724	1.94
Mako sharks	985	125	860	0.07
Thresher sharks	1,224	3	1,221	0.09
Oceanic whitetip shark	169	0	169	0.01
Silky shark	128	0	128	0.01
Total	30,230	128	30,102	2.11
Tuna PMUS				
Albacore	167	167	0	0.01
Bigeye tuna	40,027	39,251	776	2.80
Yellowfin tuna	12,159	11,935	224	0.85
Bluefin tuna	0	0	0	0.00
Skipjack tuna	7,741	7,655	86	0.54
Other tunas	0	0	0	0.00
Total	60,094	59,008	1,086	4.20
Other PMUS				
Mahimahi	6,060	6,011	49	0.42
Moonfish	2,140	2,137	3	0.15
Wahoo	8,229	8,208	21	0.57
Oilfish	3,248	2,747	501	0.23
Pomfret	13,195	13,083	112	0.92
Total	32,872	32,186	686	2.30
Total PMUS	137,954	105,898	32,056	9.64
Non-PMUS Sharks	67	0	67	0.00
Total Non-PMUS	475	31	444	0.03
Total All Species	138,429	105,929	32,500	9.67

Table 8. For the period 1 January - 31 December, 2019, Hawaii and California-based pelagic longline vessels annual statistics for fishing outside the U.S. EEZ and with deep sets, including effort (number of vessels, trips, sets, and hooks set), and for each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, along with the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1,000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage

Time Period 1 January - 31 December, 2019
 Set Types Deep sets
 Fishing Area Outside U.S. EEZ

Number of vessels active	149
Number of trips (partial or completed)	1,535
Number of sets	17,309
Number of hooks set	48,859,850

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
PMUS				
Billfish PMUS				
Blue marlin	9,075	8,977	98	0.19
Striped marlin	14,782	14,200	582	0.30
Shortbill spearfish	12,558	12,194	364	0.26
Swordfish	3,768	3,645	123	0.08
Other billfishes	1,137	1,114	23	0.02
Total	41,320	40,130	1,190	0.85
Shark PMUS				
Blue shark	83,600	2	83,598	1.71
Mako sharks	3,900	337	3,563	0.08
Thresher sharks	7,519	50	7,469	0.15
Oceanic whitetip shark	324	0	324	0.01
Silky shark	235	0	235	0.00
Total	95,578	389	95,189	1.96
Tuna PMUS				
Albacore	4,177	4,086	91	0.09
Bigeye tuna	183,133	177,960	5,173	3.75
Yellowfin tuna	49,847	48,221	1,626	1.02
Bluefin tuna	14	14	0	0.00
Skipjack tuna	25,311	25,023	288	0.52
Other tunas	0	0	0	0.00
Total	262,482	255,304	7,178	5.37
Other PMUS				
Mahimahi	31,445	31,069	376	0.64
Moonfish	22,460	22,226	234	0.46
Wahoo	36,102	35,901	201	0.74
Oilfish	13,283	11,187	2,096	0.27
Pomfret	39,805	39,478	327	0.81
Total	143,095	139,861	3,234	2.93
Total PMUS	542,475	435,684	106,791	11.10
Non-PMUS Sharks	205	0	205	0.00
Total Non-PMUS	5,540	154	5,386	0.11
Total All Species	548,015	435,838	112,177	11.22

Active Vessels

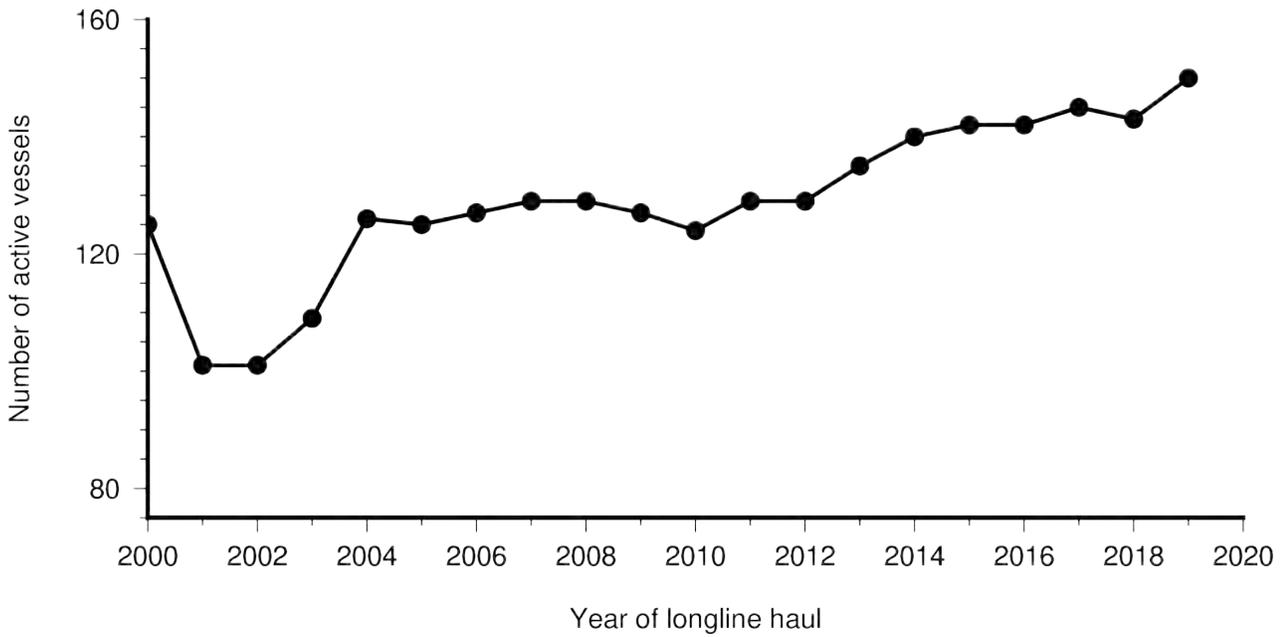


Figure 1: Number of active longline vessels based in Hawaii and California, by year for haul years 2000–2019.

Trips

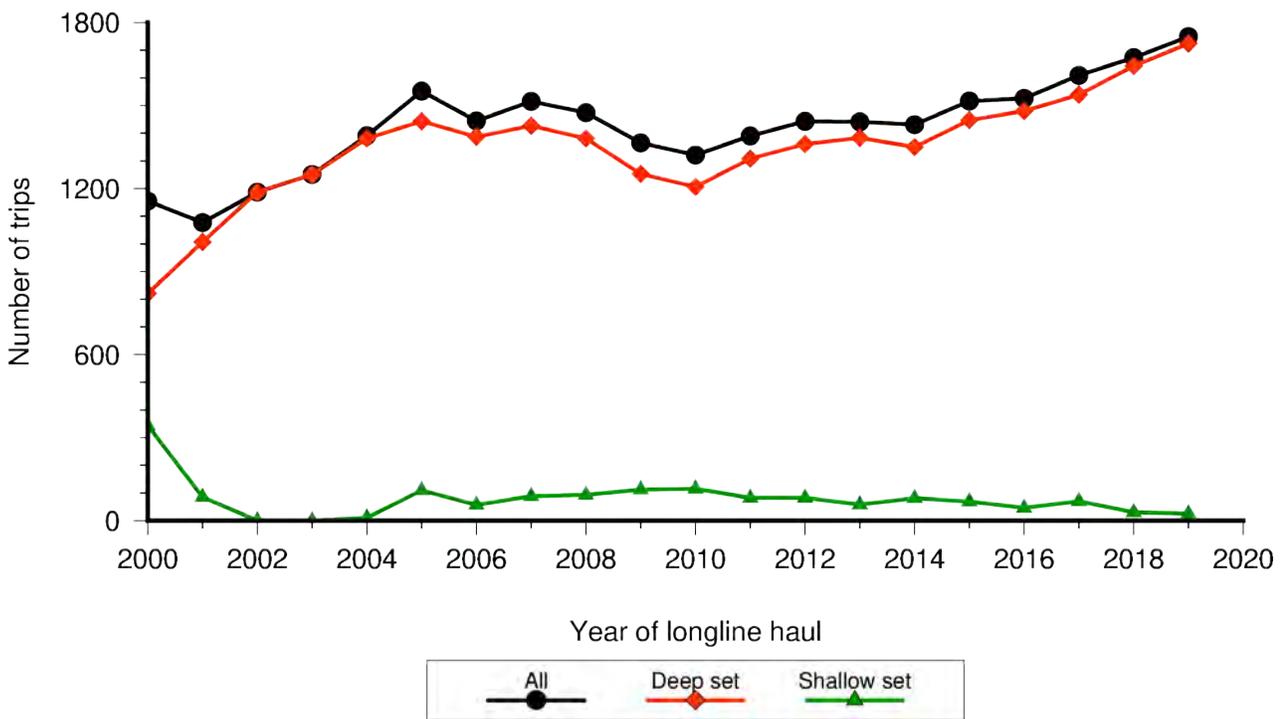


Figure 2: Number of longline trips based in Hawaii and California, by year for haul years 2000–2019.

Sets

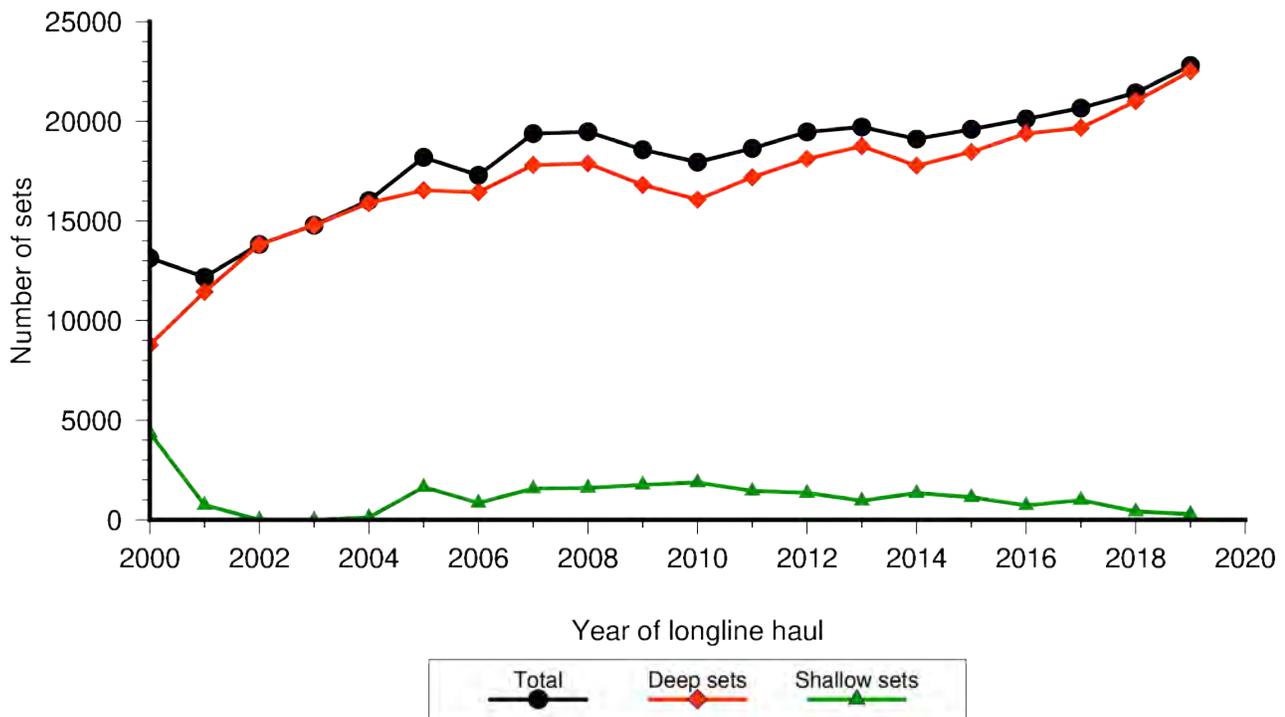


Figure 3: Number of fishing sets by vessels based in Hawaii and California, by year for haul years 2000–2019.

Hooks Set

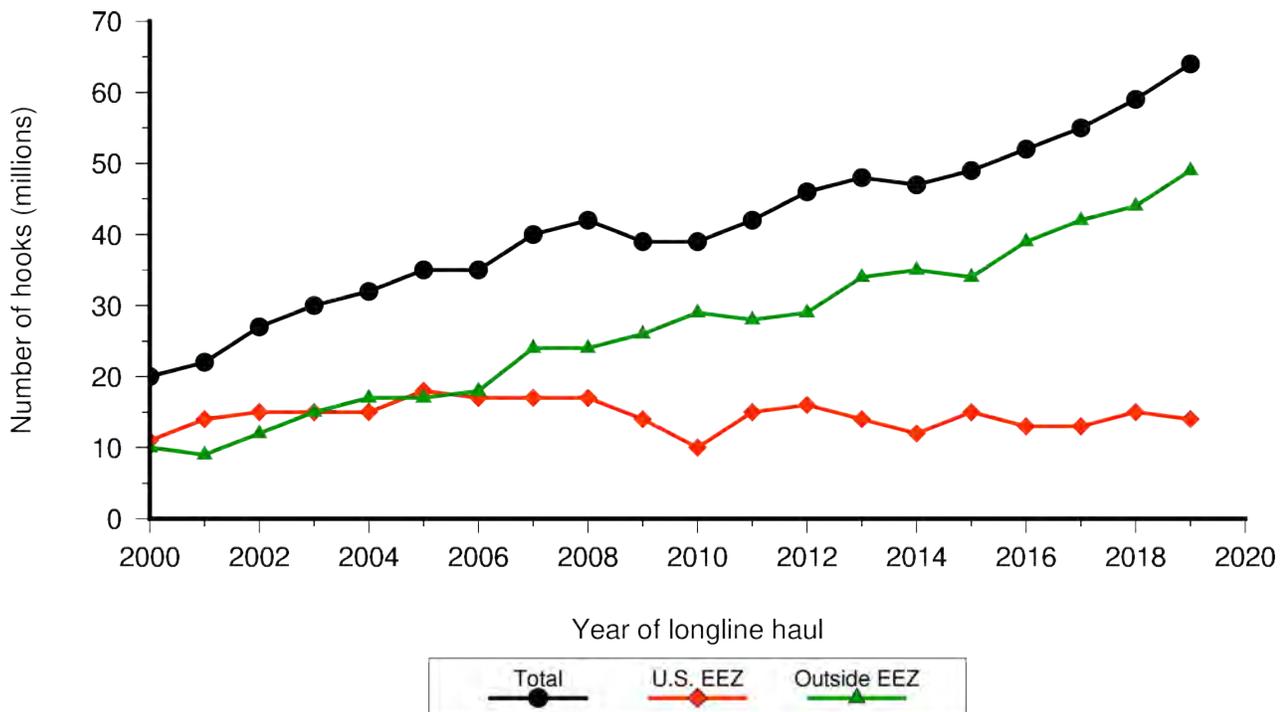


Figure 4: Number of hooks in millions, set by vessels based in Hawaii and California by year, 2000–2019.

Tuna Catch

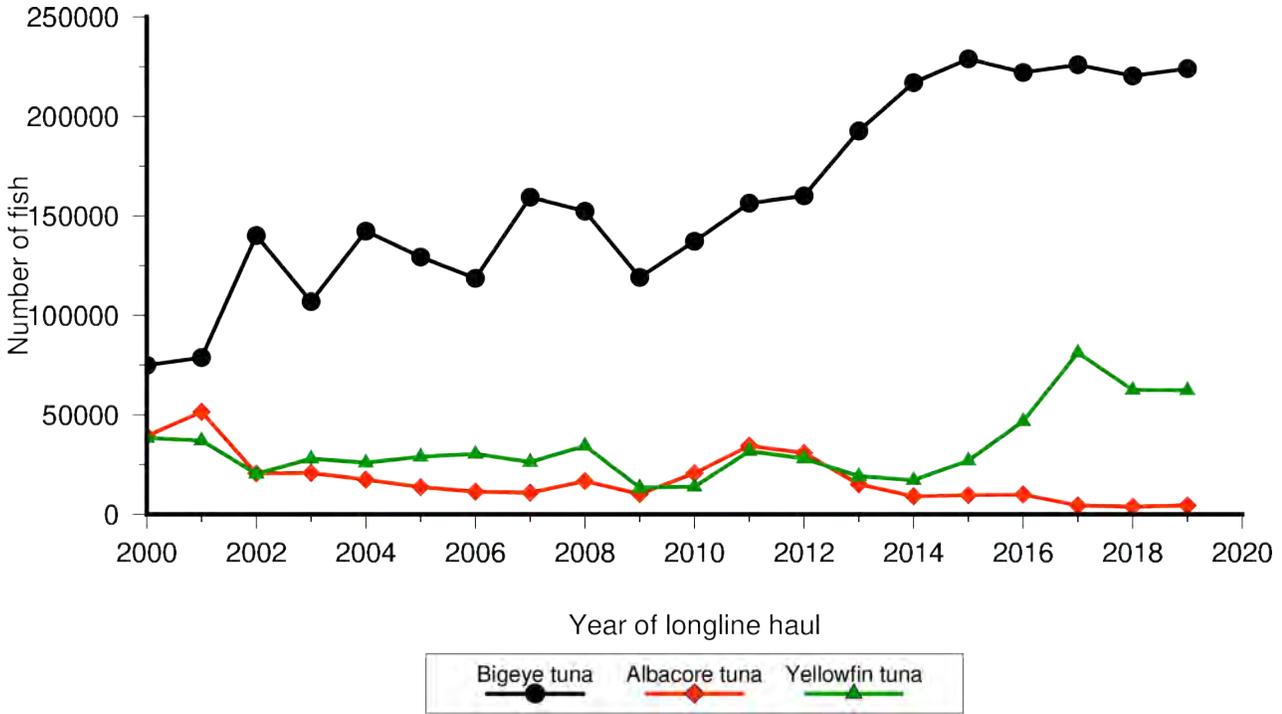


Figure 5: Annual catch (kept + released) of albacore tuna, bigeye tuna, and yellowfin tuna by longline vessels based in Hawaii and California by year, 2000–2019.

Billfish Catch

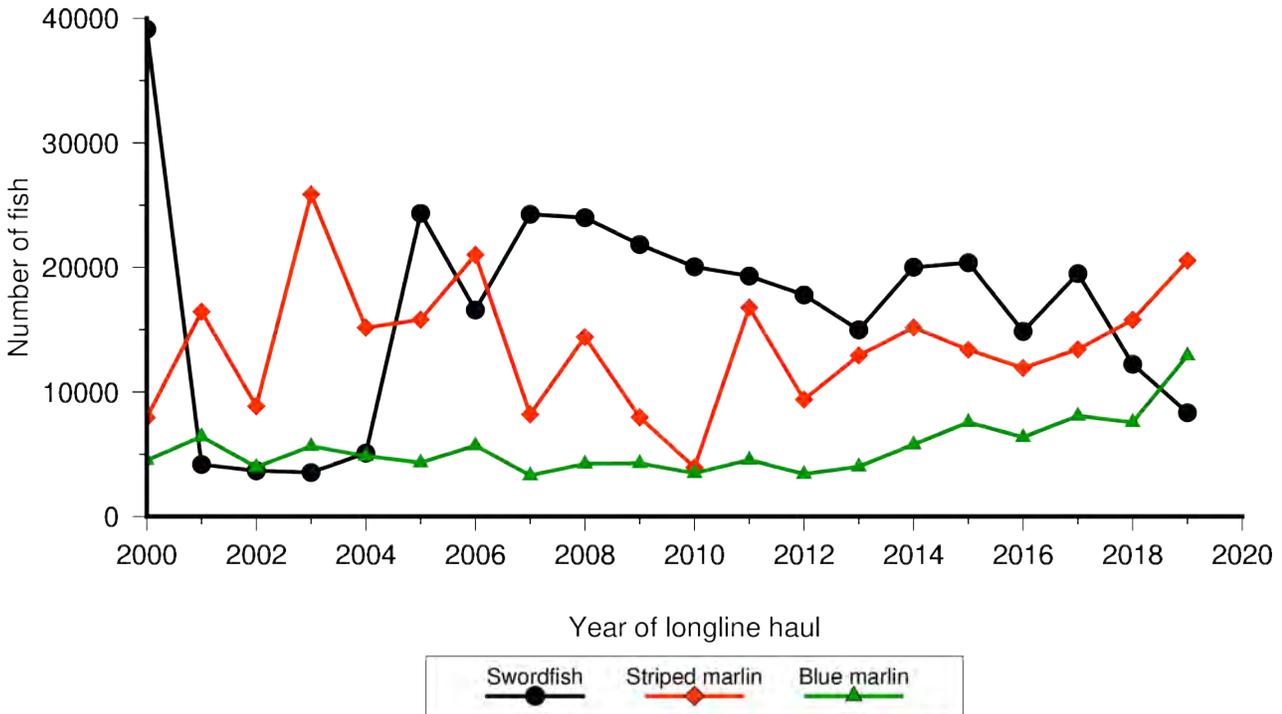


Figure 6: Annual catch (kept + released) of swordfish, striped marlin, and blue marlin by longline vessels based in Hawaii and California by year, 2000–2019.

Shark Catch

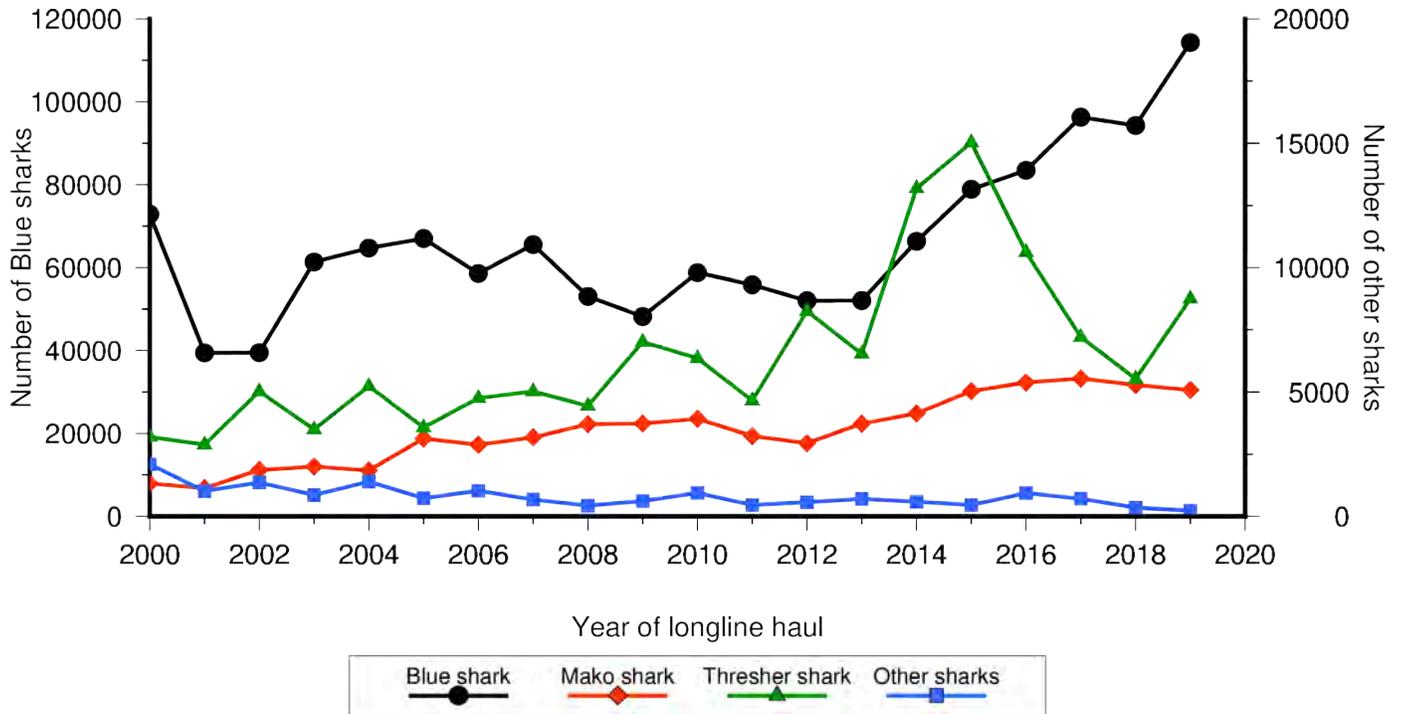


Figure 7: Annual catch (kept + released) of blue shark, mako shark, thresher shark, and other sharks by longline vessels based in Hawaii and California by year, 2000–2019.

Other PMUS Catch

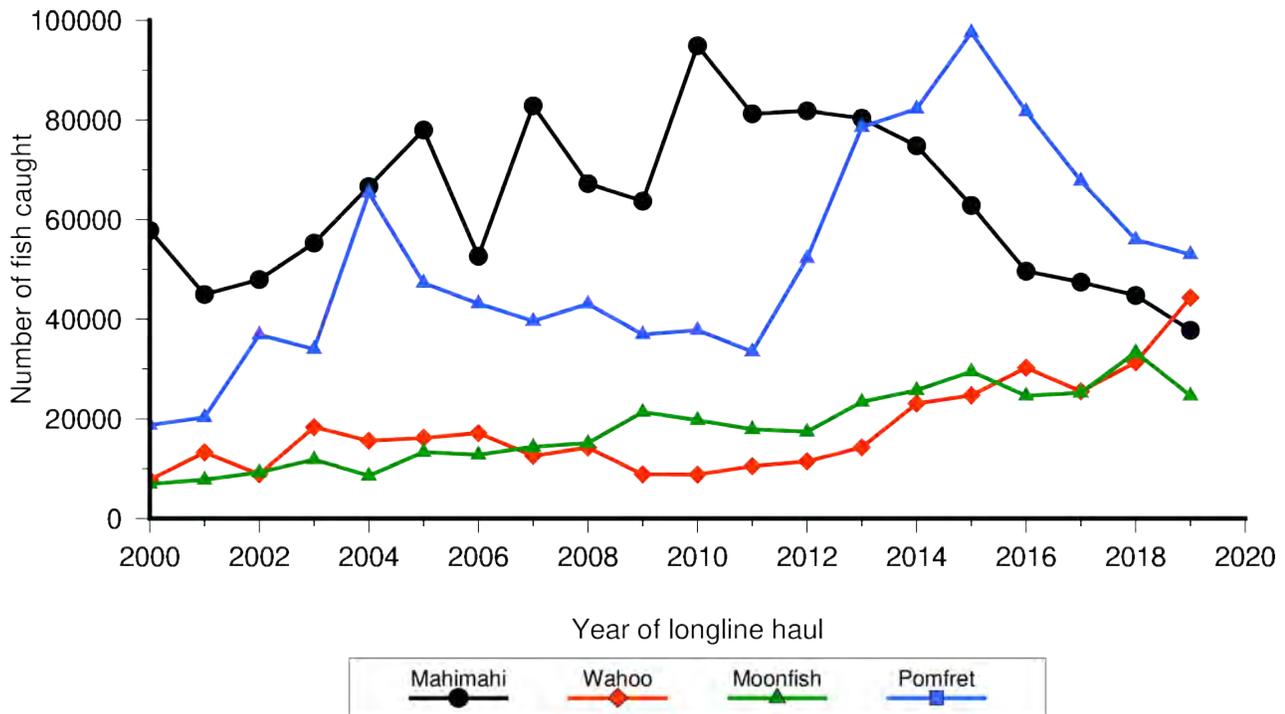


Figure 8: Annual catch (kept + released) of mahimahi, wahoo, moonfish, and pomfret by longline vessels based in Hawaii and California, by year 2000–2019.

Sets

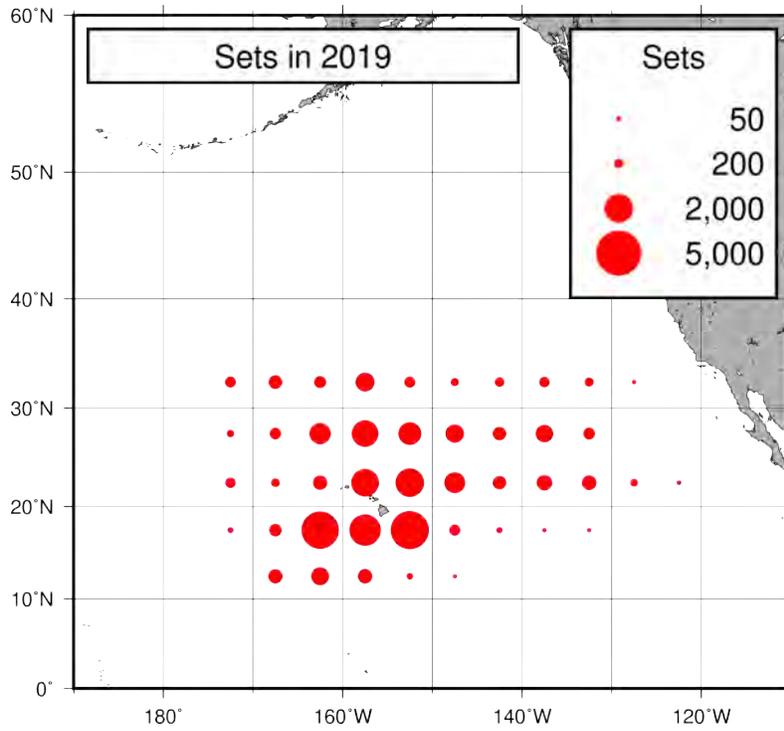


Figure 9: Spatial distribution of the total number of sets by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2019 (provisional data).

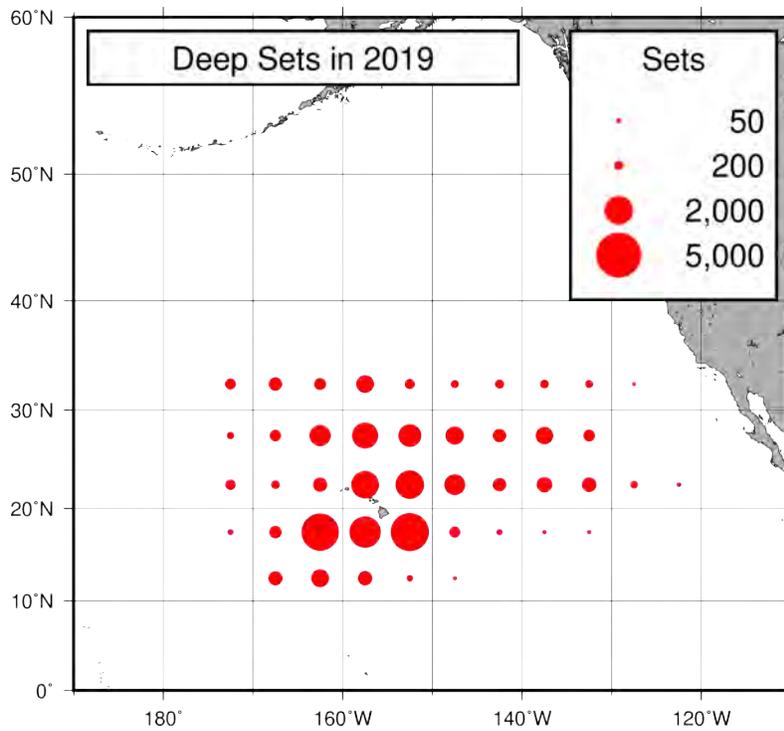


Figure 10: Spatial distribution of the number of deep-set sets by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2019 (provisional data).

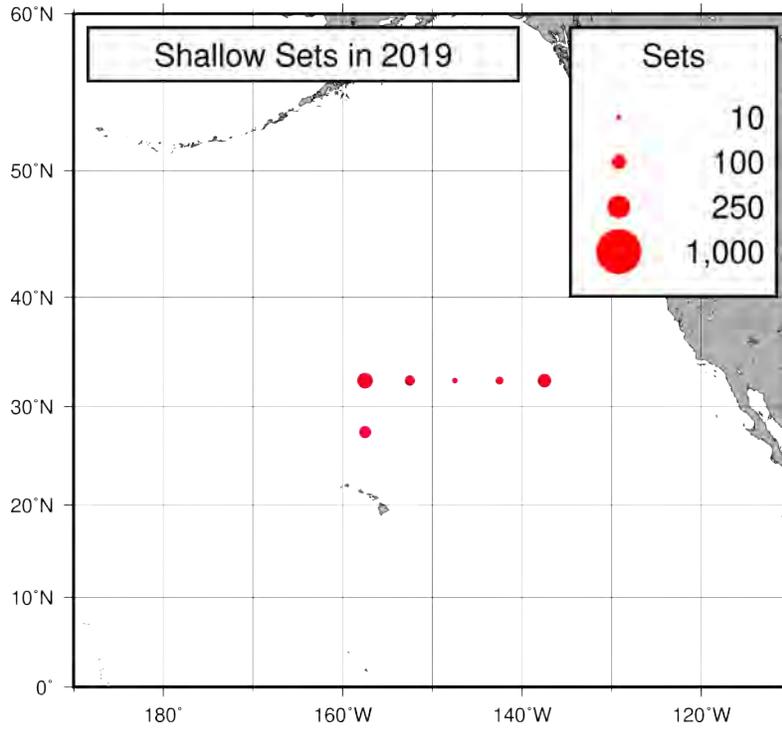


Figure 11: Spatial distribution of the number of shallow-set sets by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2019 (provisional data).

Total Effort

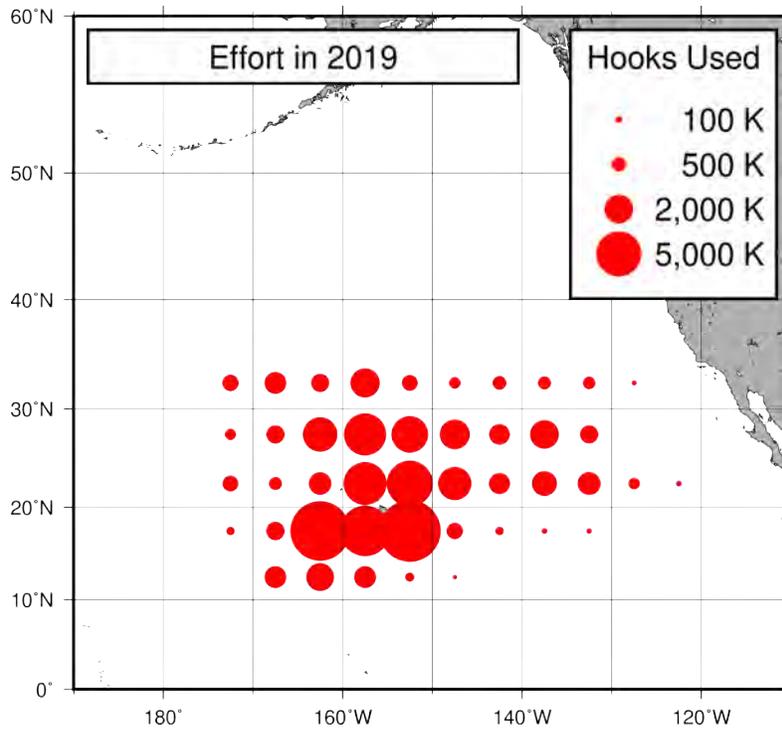


Figure 12: Spatial distribution of the total number of hooks set by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2019 (provisional data).

Deep Effort

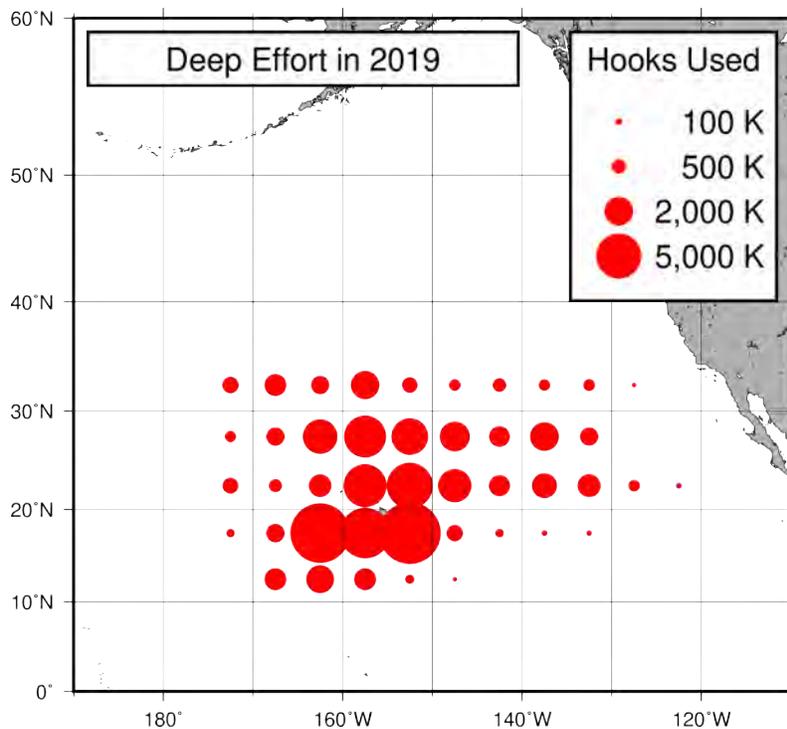


Figure 13: Spatial distribution of the number of deep-set hooks set by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2019 (provisional data).

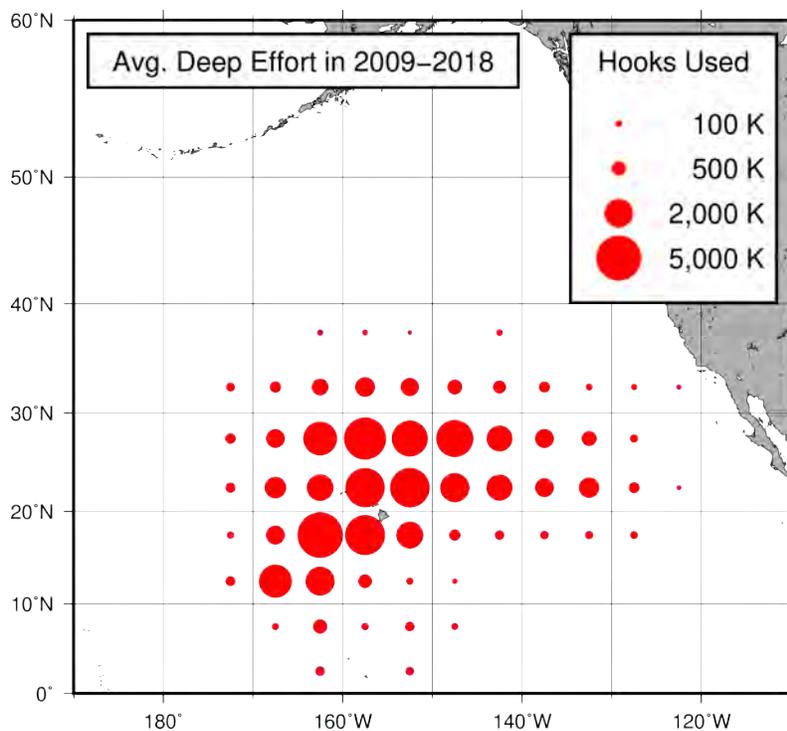


Figure 14: Spatial distribution of the average number of deep-set hooks set by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2009–2018 .

Shallow Effort

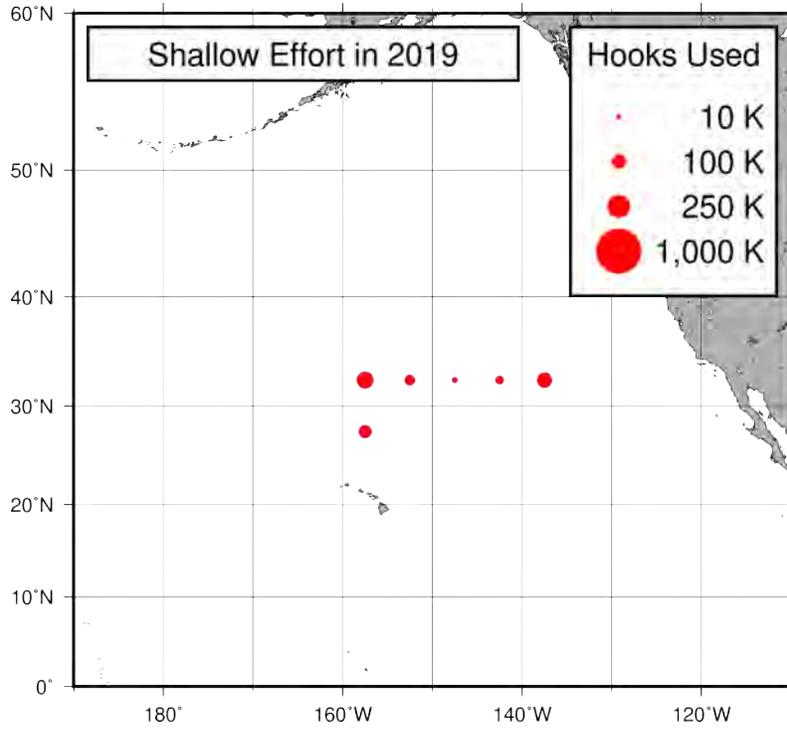


Figure 15: Spatial distribution of the number of shallow-set hooks set by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2019 (provisional data).

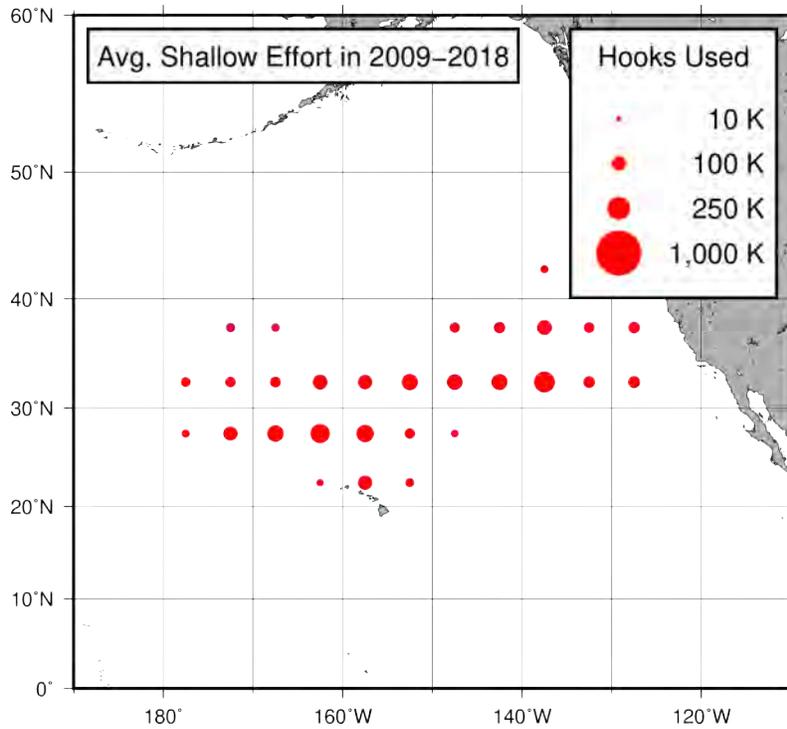


Figure 16: Spatial distribution of the average number of shallow-set hooks set by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2009–2018 .

Bigeye Catch

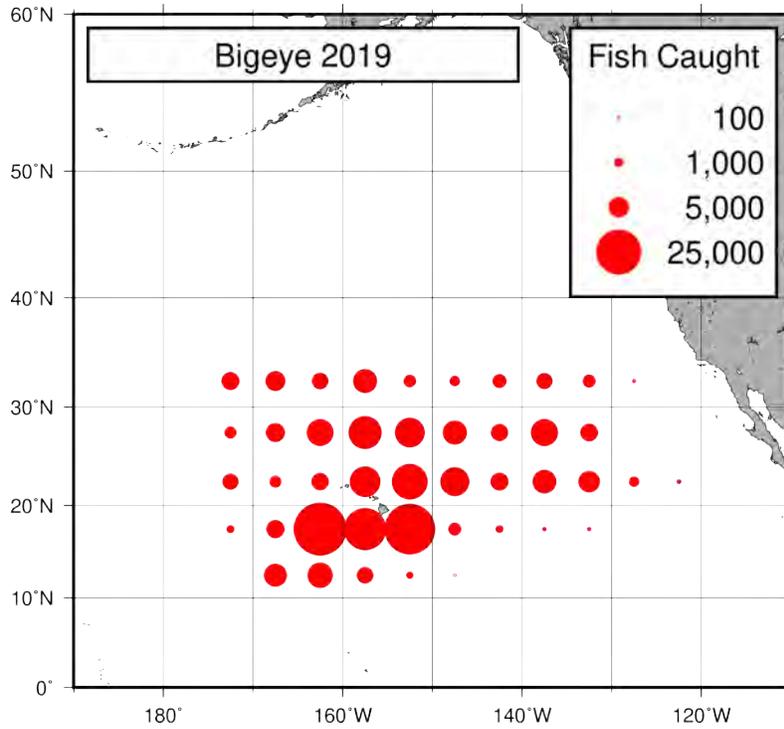


Figure 17: Spatial distribution of the total number of bigeye tuna caught by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2019 (provisional data).

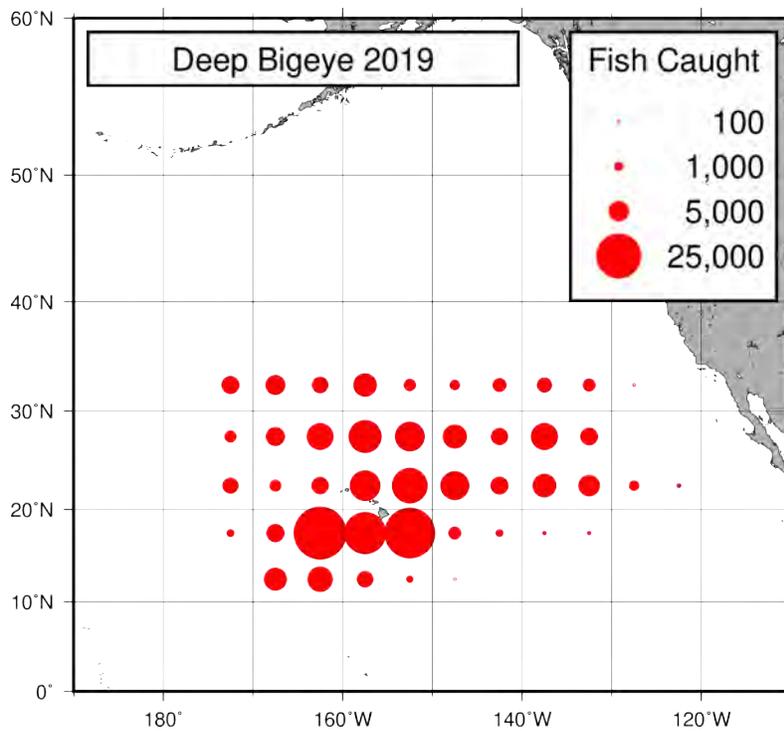


Figure 18: Spatial distribution of the number of deep-set bigeye tuna caught by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2019 (provisional data).

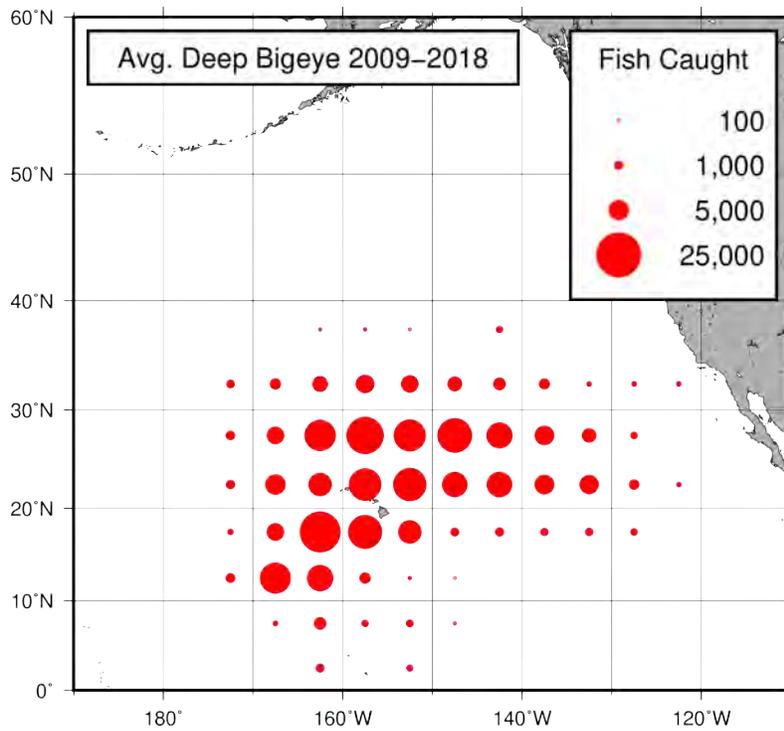


Figure 19: Spatial distribution of the average number of deep-set bigeye tuna caught by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2009–2018.

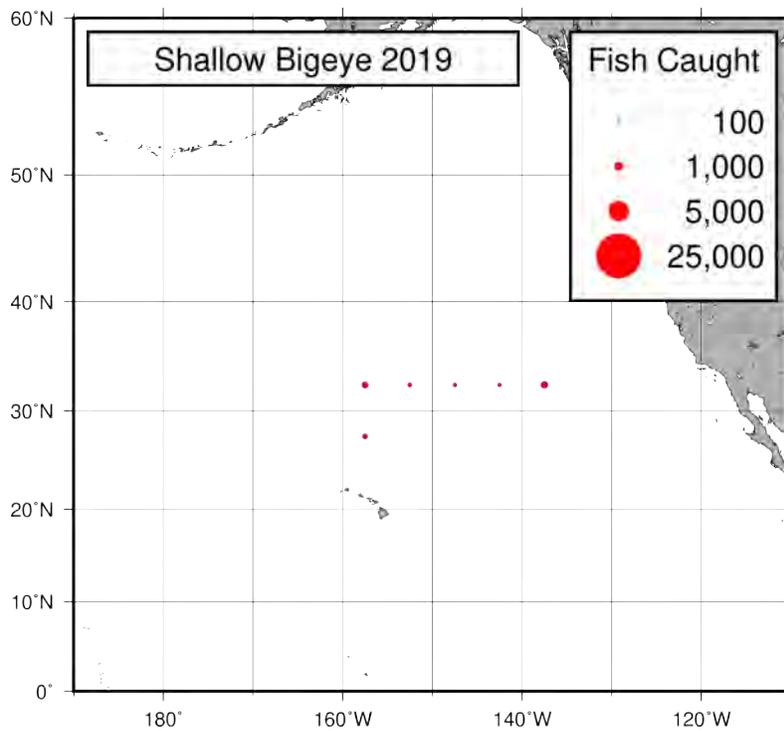


Figure 20: Spatial distribution of the number of shallow-set bigeye tuna caught by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2019 (provisional data).

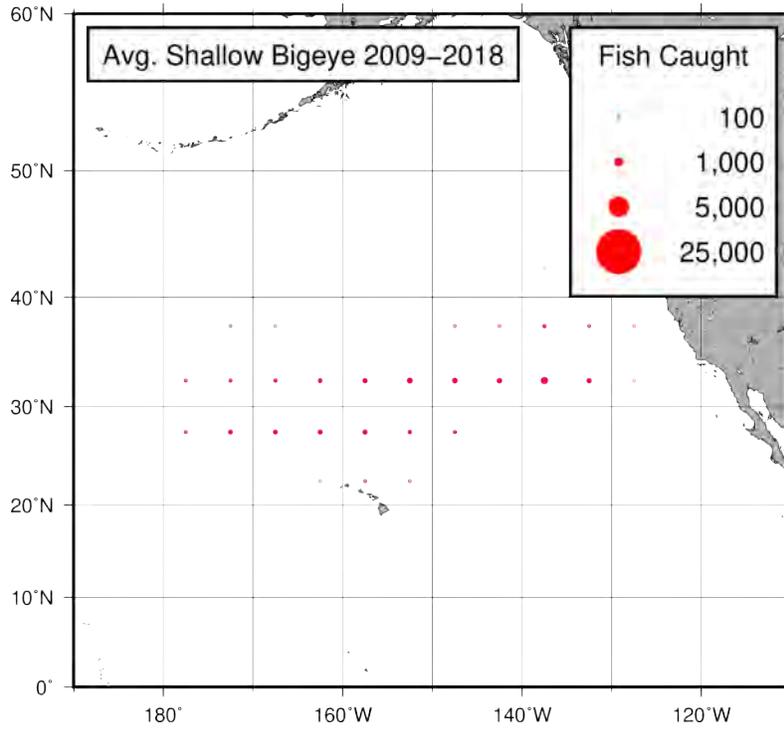


Figure 21: Spatial distribution of the average number of shallow-set bigeye tuna caught by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2009–2018.

Swordfish

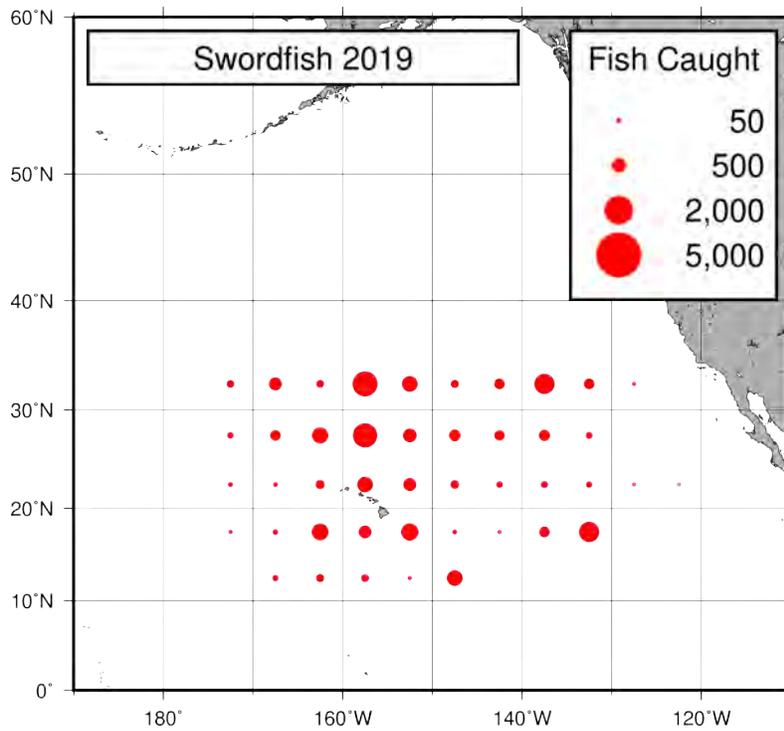


Figure 22: Spatial distribution of the total number of swordfish caught, by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2019 (provisional data).

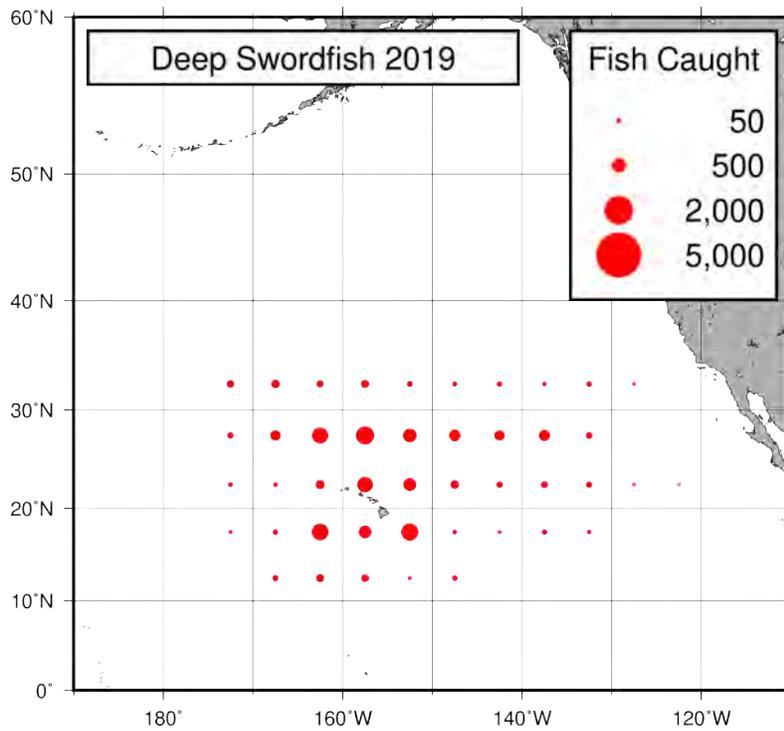


Figure 23: Spatial distribution of the number of deep-set swordfish caught, by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2019 (provisional data).

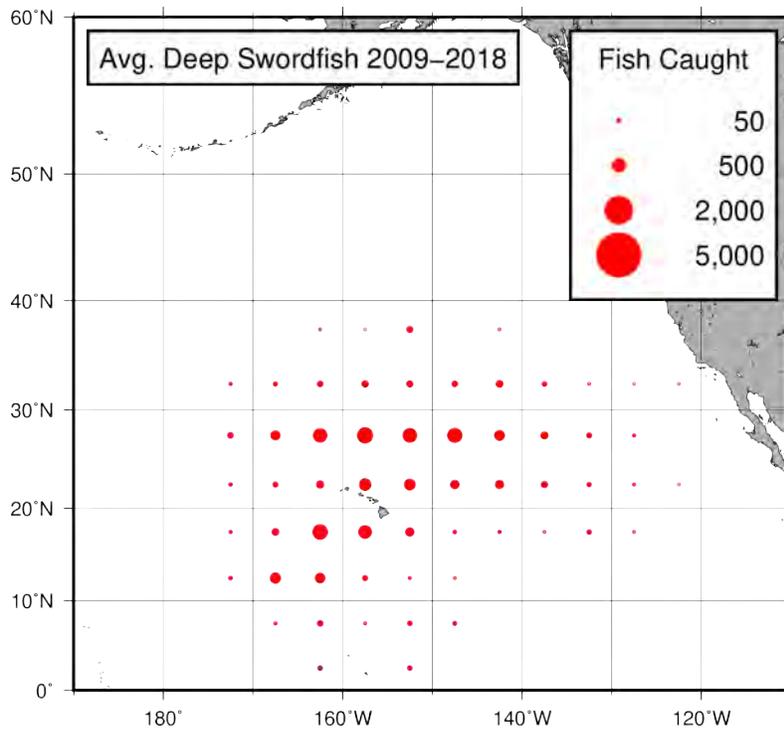


Figure 24: Spatial distribution of the average number of deep-set swordfish caught, by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2009–2018.

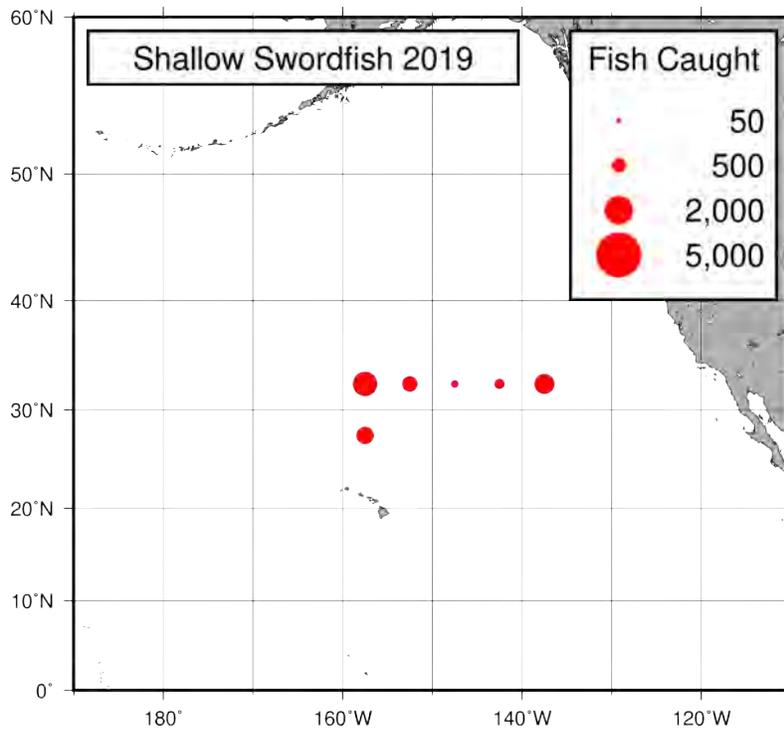


Figure 25: Spatial distribution of the number of shallow-set swordfish caught, by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2019 (provisional data).

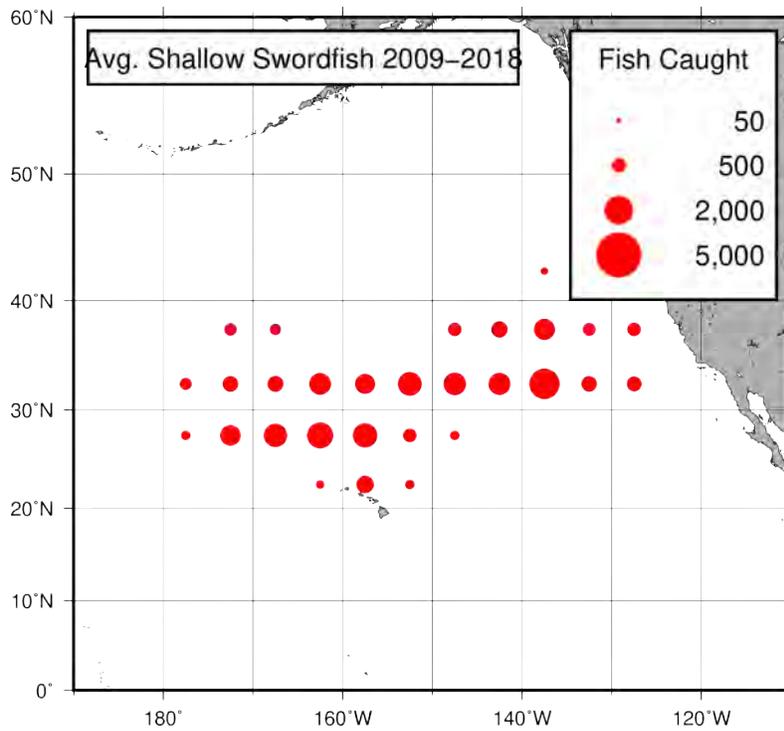


Figure 26: Spatial distribution of the average number of shallow-set swordfish caught, by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2009–2018.